

ABSTRACT

There are provided a polishing apparatus and a polishing method capable of performing polishing a work (such as a wafer) with high efficiency and high precision, a novel work holding plate effectively holding a work and an adhering method for a work capable of adhering the work on the work holding plate with high precision. The polishing apparatus comprises: a polishing table(29); and a work holding plate(38), wherein a work held on the work holding plate(38) is polished supplying a polishing agent solution(41) in the apparatus, and in polishing action, an amount of deformation of the polishing table(29) in a direction normal to an upper surface thereof with respect to the upper surface thereof and/or an amount of deformation of the work holding plate(38) in a direction normal to a work holding surface thereof is restricted to 100 μm or less by forming the polishing table(29) in one piece, contriving flow paths of cooling water and others.

090926243-092801

(19) 世界知的所有権機関
国際事務局



(43) 国際公開日
2001 年 8 月 9 日 (09.08.2001)

PCT

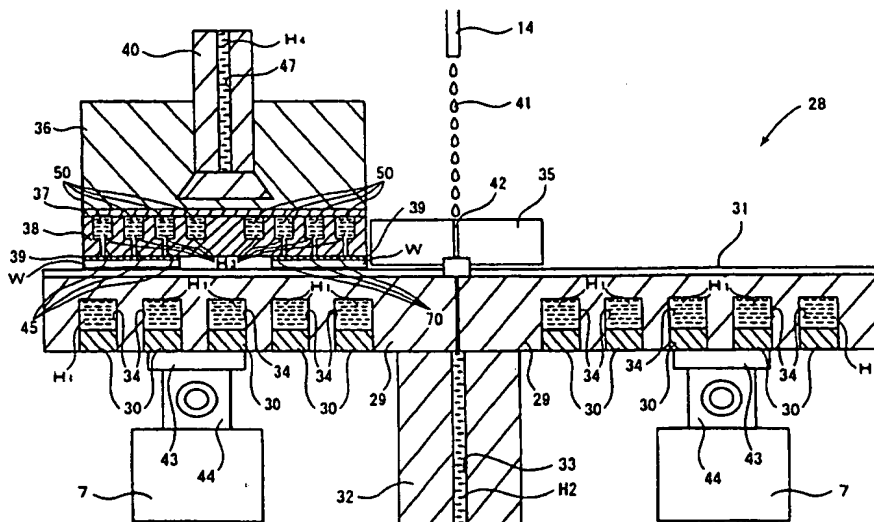
(10) 国際公開番号
WO 01/56742 A1

- (51) 国際特許分類⁷: B24B 37/04, 37/00 (72) 発明者; および
(21) 国際出願番号: PCT/JP01/00568 (75) 発明者/出願人 (米国についてのみ): 木内悦男 (KI-UCHI, Etsuo) [JP/JP], 林 俊行 (HAYASHI, Toshiyuki) [JP/JP]; 〒370-3533 群馬県群馬郡群馬町保渡田2174番地1 三益半導体工業株式会社 上郊工場内 Gunma (JP).
(22) 国際出願日: 2001 年 1 月 29 日 (29.01.2001)
(25) 国際出願の言語: 日本語 (74) 代理人: 石原詔二 (ISHIHARA, Shoji); 〒170-0013 東京都豊島区東池袋3丁目7番8号 若井ビル302号 Tokyo (JP).
(26) 国際公開の言語: 日本語
(30) 優先権データ: 特願2000-22591 2000 年 1 月 31 日 (31.01.2000) JP (81) 指定国 (国内): KR, SG, US.
(71) 出願人 (米国を除く全ての指定国について): 信越半導体株式会社 (SHIN-ETSU HANDOTAI CO., LTD.) [JP/JP]; 〒100-0005 東京都千代田区丸の内一丁目4番2号 Tokyo (JP). (84) 指定国 (広域): ヨーロッパ特許 (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).
添付公開書類:
— 国際調査報告書

[続葉有]

(54) Title: POLISHING DEVICE AND METHOD

(54) 発明の名称: 研磨装置及び方法



(57) Abstract: A polishing device and a polishing method, wherein high-efficiency high-accuracy mirror finishing of work (including wafers) is made possible; a novel work holding plate for effectively holding work; and a work bonding method capable of highly accurately bonding work to such work holding plate. The polishing device comprises a polishing surface plate (29) and a work holding plate (38), so that work held by the work holding plate (38) is polished while applying a flow of polishing agent solution (41) onto the work, wherein the amount of deformation of the polishing surface plate (29) as measured normally of the surface of the surface plate and/or the amount of deformation of the work holding plate (38) as measured normally of the work holding surface of the work holding plate (38) is controlled during polishing to be not more than 100 μ m by finding ingenious ways including integration of the polishing surface plate (29) and improvement of the flow channel for cooling water.

[続葉有]